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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,483	09/15/2005	Eli Sofer	1887	.5311

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NEW YORK, NY 10119

EXAMINER
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VO, TUNG T

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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09/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/519,483

Applicant(s)

SOFER, ELI

Examiner

Tung Vo

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/22/2007</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 10-12, 14-22, 27, 29-33, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Depta (US 6,549,122).

Re claims 1 and 36. Depta discloses a system for aiding a user with a visual impairment or visual obstruction (fig. 2), comprising:

Means (11 of fig. 2) for sensing time/space characteristics and physical characteristics information about an object in a field of view;

Means (13 and 14) for interpreting said time/space characteristics and physical characteristics information and for characterizing (recognition) the object (col. 3, line 58-col. 4, line 25); and

audible information delivery device (15 and 17 of fig. 2) (Means for communicating) for audibly describing to the user the characterization of the object and said interpretation about the object (col. 4, lines 3-15).

Art Unit: 2621

Re claim 2, Depta further discloses wherein said means for sensing further comprises devices selected from the group consisting of: CCD sensors (11 of fig. 2, Note cameras 11 inherently have CCD sensors), laser imaging sensors, radar sensors, electromagnetic radiation sensors.

Re claim 3, Depta further discloses wherein said time/space characteristics and physical characteristics information about an object includes any of: physical dimensions, general shape description, texture, color, the distance and position of said user from said object, motion of said object, spatial relationships between objects (col. 3, line 58-col. 4, lines 3; Note three dimensional image).

Re claim 4, Depta further discloses wherein said means for interpreting said time/space and physical characteristics information comprises: a sensors processor (1 of fig. 2), a control unit (4 of fig. 2), and an object synthesis (13 of fig. 2) and recognition system (14 of fig. 2).

Re claim 5, Depta further discloses wherein said characterizing(recognition) is performed by a World Model (three dimensional image, col. 3, lines 58-67).

Re claim 10, Depta further discloses apparatus for aiding in obstacles avoidance (fig. 2), comprising: at least one electro-optical device to detect and identify said at least one object (11 of fig. 2); a processing unit (13 of fig. 2), which receives and processes information from said devices; and a user communication module (14, 15, and 17 of fig. 2) to receive instructions from said processing unit for the purpose of audibly describing to said person said at least one object in said field of vision, thereby enabling said person to cope with and proceed in said surroundings (col. 4, lines 9-25).

Art Unit: 2621

Re claim 11, Depta further discloses wherein at least one of said at least one electro-optical device is a computerized vision device (1 of fig. 2).

Re claim 12, Depta wherein at least one of said at least one computerized vision device is a CCD sensor (11 of fig. 1, Note the cameras inherently have CCD sensors).

Re claim 14, Depta further discloses wherein said processed information further comprises images (13 of fig. 2).

Re claim 15, Depta further discloses further comprising image understanding (col. 4, lines 38-43).

Re claim 16, Depta further teaches a knowledge database (19 of fig. 2).

Re claim 17, Depta further teaches a knowledge editor (14 and 15 of fig. 2).

Re claim 18, Depta further teaches a communications and learning subsystem (17, 15, 25, and 16 of fig. 2).

Re claim 19, Depta further teaches wherein said apparatus is worn by said person (fig. 2, Note portable device).

Re claim 20, Depta further discloses wherein said apparatus comprises a headset (fig. 3)

Re claim 21, Depta further discloses wherein said headset comprises said at least one electro-optical device (11 of fig. 3).

Re claim 22, Depta further discloses wherein said headset comprises said vocal representation unit (speakers of the headphones 15 of fig. 2).

Re claim 27, Depta further discloses a method for detecting and identifying at least one object in a field of vision, and notifying the user (fig. 2, cols. 3 and 4), comprising the steps of: acquiring a plurality of visual images of said at least one object (11 of fig. 2); processing said

Art Unit: 2621

plurality of images and said information (13 of fig. 2); and audibly describing to said person said at least one object in said field of vision (14 of fig. 2).

Re claim 29, Depta further teaches range and features extraction (col. 4, lines 9-25).

Re claim 30, Depta further discloses comprising analyzing said plurality of visual images into convex polygons (3-D image, col. 3, lines 62-67).

Re claim 31, Depta further discloses 3D object rendering (col. 3, lines 61-col. 4, line 3).

Re claim 32, Depta further discloses identifying said at least one object (col. 4, lines 9-16).

Re claim 33, Depta further discloses incorporation of a knowledge database to interactively help said person identify said at least one object (19 and 14 of fig. 2).

3. Claims 1, 5-10, 27, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Authur Hunter (US .

Re claims 1, 10, 27, and 36. Hunter discloses a system for aiding a user with a visual impairment or visual obstruction (fig. 2), comprising:

Means (10 of fig. 1) for sensing time/space characteristics and physical characteristics information about an object in a field of view;

Means (16 of fig. 1) for interpreting said time/space characteristics and physical characteristics information and for characterizing (recognition) the object (108 of fig. 2); and

audible information delivery device (18) (Means for communicating) for audibly describing to the user the characterization of the object and said interpretation about the object (110 and 114 of fig. 2).

Art Unit: 2621

Re claim 5, Hunter further discloses wherein said characterizing(recognition) is performed by a World Model (108 of fig. 2, Note object found).

Re claim 6, Hunter further discloses further comprising means for correcting and learning when said recognition by said World Model fails (108 of fig. 2, No).

Re claim 7, Hunter further discloses wherein said learning process by a World Model enrichment learning process comprises: direct teaching. generalization teaching; and refinement teaching [0010].

Re claim 8, Hunter wherein said audible information delivery device includes a text to speech translator, and headphones or a speaker (110 and 114 of fig. 2; and 18 of fig. 1).

Re claim 9, Hunter further discloses wherein CCD data derived from an object identified as belonging to the object class of signs is processed by OCR software (fig. 2).

4. Claims 10, 13, 17, 34 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Sussman (US 6,198,395).

Re claims 10, 13, 27, and 34-35, Sussman discloses apparatus for aiding in obstacles avoidance (fig. 1 and 5), comprising: at least one electro-optical device to detect and identify said at least one object (11 of fig. 1); a processing unit (18 of fig. 1), which receives and processes information from said devices; and a user communication module (20 of fig. 1) to receive instructions from said processing unit for the purpose of audibly describing to said person said at least one object in said field of vision, thereby enabling said person to cope with and proceed in said surroundings (col. 3, lines 9-45); wherein said at least one electro-optical device is a laser imaging sensor (11 of fig. 1); the automated layout of a virtual world image(col.

Art Unit: 2621

3, lines 38-46); the verbal description of said virtual world image to said person (audio feedback to person, fig. 1).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 23-26, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Depta (US 6,549,122) in view of Basson et al. (US 6,975,991).

Re claims 23-26, and 28, Depta teaches the control unit (14 of fig. 2) would obviously manually and the control unit having the manual controls are detachable from the belt (portable device is detectable, 1 of fig. 2); and controlling the adaptive sensitivity of the brightness of illumination (col.3, lines 29-35).

It is noted that Depta does not particularly teach a beltset and an automatic speech recognition unit for verbal input from said person to said information processing.

Basson teaches the user wears the eyeglasses (204 of fig. 2) on his or her face in a normal manner and also preferably carries the wearable personal computer (200 of fig. 2) on his or her body, e.g., attaches the personal computer to a waist belt; and an automatic speech recognition unit for verbal input from said person to said information processing (218 of fig. 2; Note the transcription service (218 of fig. 2), itself, may comprise: a human stenographer who transcribes the audio content, in real-time, into text; a voice recognition system which automatically



Art Unit: 2621

recognizes the audio content, also in real-time, and outputs a textual representation of the decoded speech; or some combination of both human stenographer and automatic recognition; and the computer (200 of fig. 2) may execute a speech recognition engine).

Therefore, taking the teachings of Depta and Basson as a whole, it would have been obvious to one of ordinary skill in the art to use the beltset and speech recognition of Basson for carrying the device Depta in order to allow the user to easily detect voice and moving around.

#### ***The prior art made of record***

Balfe (US 6,774,778 B1) discloses navigation device for use by visually impaired.

Zeng (US 6,569,956) discloses ultrasonic distance detecting for visually impaired pedestrians.

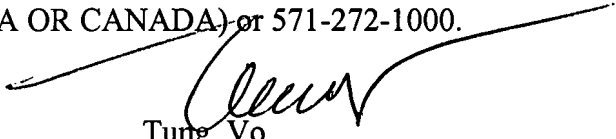
#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tung Vo  
Primary Examiner  
Art Unit 2621